The Science and Policy of Global Climate Change: Professional Development for K-12 Teachers

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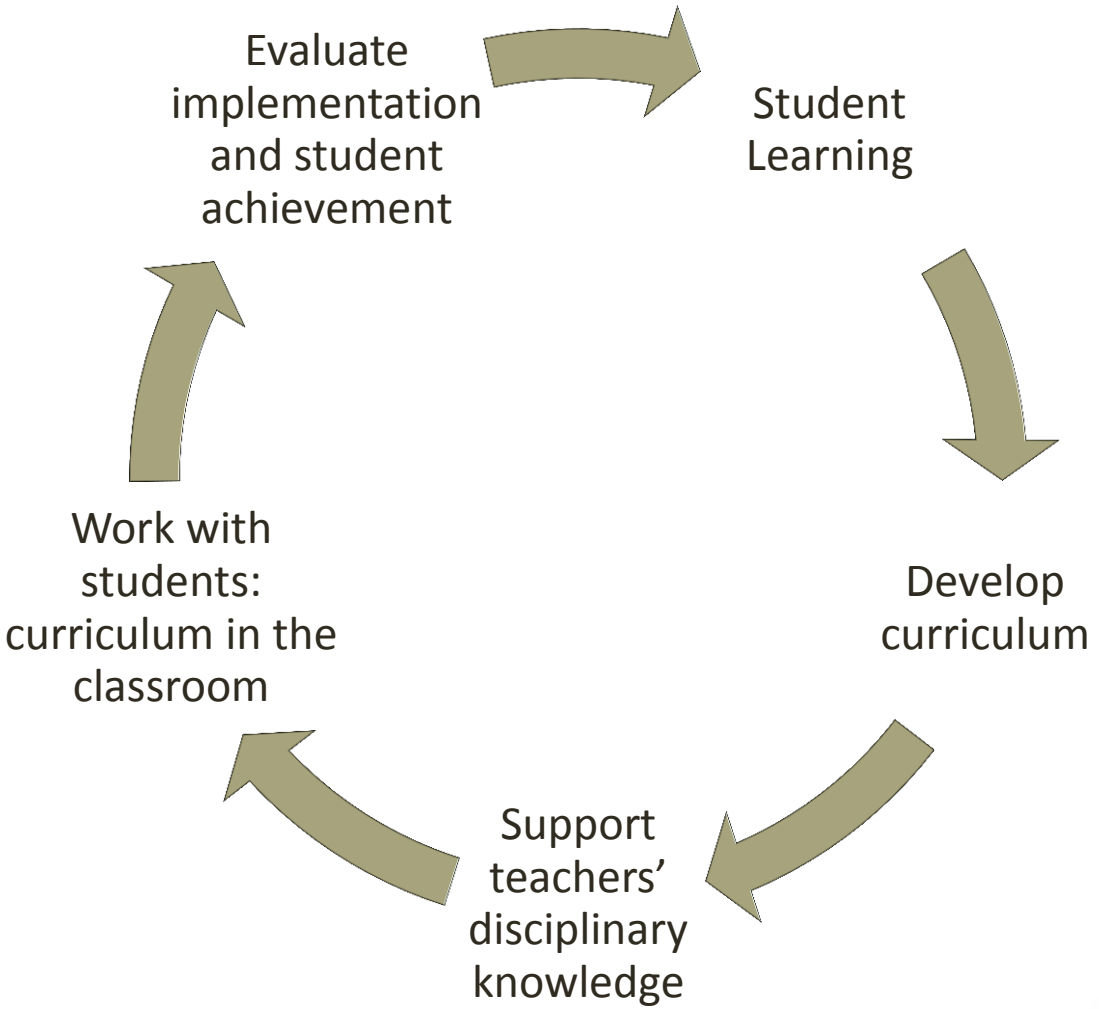
Curriculum + Professional Development Leads to Student Achievement



Climate Change Education: What's the big deal?

Through our **interdisciplinary** collaboration (teachers, climate scientists, social scientists and teacher educators) and **extensive classroom research and evaluation** work, our understanding of <u>why</u> and <u>how</u> we teach about climate change developed and advanced.

Why we teach climate change

Science classrooms with an environmental science framework:

- Teach science and scientific practices
- Develop ability to be critical consumers of information
- Build capacity to act
- Support identification of environmental values and attitudes

How we teach climate change

- Teachers and textbooks spend little time on the how we know and how scientific understanding of climate change has progressed and will continue to change.

- The curriculum and PD placed an emphasize on both **what** we know about climate change and **how** we know it.
  - Small group work to analyze data and construct evidence-based claim (engage in argumentation).

- Students' prior "beliefs" (and cultural/political values) affect curriculum, instruction

Questions

We believe that the science of climate change should be taught in k-12 classrooms – both science content and scientific practices – to provide information and skills that build students' capacity to act in a scientifically informed way that aligns with their values.

Do you agree with our conclusion about why we teach climate change?

Questions

- What strategies do you use when you work with teachers/students who have a range of prior knowledge or beliefs than what you have prepared for?

- How does this change the teaching objectives? The curriculum?

Questions

- Do you think it is important in science classrooms to talk about how do we know? Why?

- What resources do you have that support teaching about how do we know and other scientific practices?

Questions

- What are strengths of a mixed group (multi-disciplinary) in developing climate change materials?

- What are the challenges?

Climate Change Education at Stanford

Curriculum is available at
climatechange.stanford.edu

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